



INVESTING IN INFRASTRUCTURE

2012

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probity (prō'bitē)

n. [from Latin probitas: good, proper, honest.] adherence to the highest principles, ideals and character.

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Key Trends for Infrastructure

Fundraising rebounded from the Global Financial Crisis with commitments likely to increase in 2012, but the fundraising market will remain crowded and competitive

- \$20.8 billion was raised in 2011
- Over 100 funds currently seek over \$90 billion in capital

Investors continue to establish dedicated infrastructure allocations, programs and investment teams

- New investors are moving from reconnaissance to committing capital and team resources to infrastructure
- As an alternative, certain investors are creating “inflation-linked” allocations that include infrastructure, together with timber, commodities, and other similar assets

Most investors will continue to invest in “backyard funds”

- Investors are increasingly focused on their home markets
- Europe is the deepest and most active fundraising market, with a heavy focus on renewable energy and PFIs; however, the sovereign risk crisis in Europe is stressing the market
- Asia presents more Greenfield opportunities, with higher risk and theoretically higher return, with principal backing from local Sovereign Wealth funds
- The U.S. market is still in an early stage of development, hampered by a fractured set of PPP rules set state by state and inexperience both at the governmental level and with fund managers
- Most global funds are heavily focused on Europe, Australia, and North America with small allocations to emerging markets

Fund investors will be increasingly aggressive on fees and carry, especially for Core Brownfield funds

- Investors will increasingly reject the “2 and 20” structure, especially for Core Brownfield funds, and will push for much lower fees and carry
- Differential pricing will increasingly be a part of the market, with investors willing to pay more in fees and carry for Greenfield and Opportunistic strategies
- Scale investors, essential for funds to achieve their size objectives, will continue to use their size to negotiate preferred terms including moderated fees, preferred co-investment, and in much fewer cases, moderated carry

The largest, most mature infrastructure investors will increasingly pursue not only co-investments, but also direct investments

- Developing dedicated co-investment and direct investment programs is resource intensive, and only the largest investors can successfully pursue such programs
- Key to success is attracting and retaining experienced investment professionals who are in high demand
- The vast majority of investors seeking infrastructure investment exposure will rely on more traditional private equity style funds

Overview

Over the last decade, infrastructure investing has become an area of increasing global focus among institutional investors and among various governmental agencies that are sources of infrastructure deal flow.

For many institutional investors new to the sector, infrastructure investing remains in a state of flux as it shifts from being an investment niche to an independent asset class. Although there is a wide array of research available that covers the infrastructure sector in general, this white paper focuses on how institutional investors are approaching the market.

This young investment sector has yet to develop a full set of “best practices.” Long-standing and new investors continue to evaluate offerings against both their existing portfolios and their direct and co-investment objectives. The differences in investor approaches and infrastructure experience create some interesting conflicts — even within the same investment vehicles — between investors with goals of near-term liquidity and those seeking long-term exposure through these longer-lived assets, and between larger investors with pricing power and smaller investors without.

Defining Institutional Infrastructure Investing

Infrastructure investing covers a wide range of different project types with different risk/return profiles. These investment opportunities are capital intensive and are either in heavily regulated industries (as in the energy and transportation sectors) or are done under long-term concessions with public sector entities through Public Private Partnerships (“PPPs”). The sector is focused on equity investing, although there are very few funds that are focused on making debt investments. Most of the largest closed-end funds focused on infrastructure are diversified to some degree by project type and geography, so it is useful to review the various sectors individually.

Public/Private Partnerships

Historically, governments around the world have shouldered the burden of infrastructure finance through a variety of public-financing structures, typically bond issuances, usually offset by pay-as-you-go user fees or by taxes. However, stretched public finance capacities, together with limitations on the public sector’s effectiveness in managing projects pre- and post-completion, have created a growing trend of governments turning to the private sector for help. As a result, Design-Build-Finance-Operate (“DBFO”) PPPs have emerged as one of the most important models to close the infrastructure-funding gap, not only for new projects but also for existing assets with large deferred-maintenance needs. Many governments look to the private sector not simply as a source of funding but also for the experience necessary to improve productivity and service performance outcomes for infrastructure.

The major types of projects covered by PPPs include:

- **Transportation** PPPs have played an increasingly central role in addressing the pressing need for new and well-maintained roads, tunnels, bridges, airports, ports, railways, and other forms of transportation. Historically, transportation has represented more PPP transactions than any other sector. The ability to identify the DBFO elements of discrete transportation assets has facilitated

the use of PPPs in transport projects. In addition, the growing acceptance of user fees for transportation assets allows for easy cash flow reconciliation. The scale and long-term nature of transportation projects are also well served by PPPs.

- **Water & Waste** Water and wastewater management, traditionally the province of state and local governments, represents another fast-growing area for PPPs. Many countries are faced with increasing demands for clean water while the process of dealing with waste products amid environmental concerns is becoming more complex.
- **Education** PPPs can provide substantial innovation for education infrastructure and service delivery. Under typical education PPPs, the private sector invests in the school infrastructure and provides related non-core services (school transport, food services, cleaning & maintenance, and so on) under contract while the government continues to provide core services — namely teaching.
- **Hospitals** In recent years, a number of countries have aggressively moved to diversify the sources of healthcare funding by using PPP arrangements to meet the growing demand for healthcare infrastructure. Typically, a private consortium designs, builds, and operates a hospital or healthcare facility and leases it back to the relevant government entity.
- **Public Housing, Land & Area Development** Several central governments have encouraged the use of concession models in pilot PPP public housing projects. Joint ventures allow the local governments to retain control over planning and development while utilizing the private partners' resources and expertise.
- **Defense** PPP projects in the defense sector include equipment maintenance and installation, supply-chain integration and operational support, depot maintenance, specialized military training, and real estate management. The projects typically are designed to overcome fiscal constraints, manage life-cycle costs, and reduce pressure on military personnel.
- **Prisons** PPP projects in this sector have led to noticeable reduction in construction times and costs for new projects as private sector expertise has been brought in, but the outsourcing of running prison facilities has been sometimes controversial.

PPPs were pioneered in Australia, Canada, and the UK and have been increasingly adopted globally. The United States has been slower to adopt the model in part because PPP policies have heretofore not been set nationally, but on a state-by-state basis. In certain jurisdictions, labor unions have fought against PPPs, fearing their potential impact on unionized labor, while in others, specific projects have become bones of contention between political parties or factions. Recently, there has also been a political debate in the UK about certain past PPP transactions that some feel generated too much profit for private parties. Even as the government looks to expand PPPs to assist in economic stimulus during difficult times, this debate is reshaping the terms of such activity between the public and private sector.

Private Infrastructure Investments

Though discussion of infrastructure investments often focuses on high profile PPPs, many infrastructure projects are purely private transactions without government support or contracts, operating in industry sectors that are heavily regulated. The energy sector in particular trends more towards private investment in such projects as generation facilities, natural gas transmission lines, and wind farms, but there are also independent projects in areas such as transportation, waste management, and telecommunications.

The returns in private investments are often driven by capital gains rather than current income. Some investors that focus on PPPs as core infrastructure assets consider investments made in private investments – typically via operating companies versus individual assets – to be purely private equity investments and not infrastructure at all. Others find the private investment approach interesting given its higher return profile, especially as part of a diversified portfolio of infrastructure assets. Most of the funds that focus on private investing seek to position or reposition assets or operating companies to be attractive stabilized investments in order to capture multiple arbitrages from long-term core investors who acquire such assets.

Risk/Return Spectrum

Historically, risk/return in the infrastructure space was characterized (or mischaracterized) in terms of the stage of development of an infrastructure project, with Brownfield representing the lowest risk and lowest return on one end of the spectrum, and Greenfield representing highest risk and highest return on the other end of the spectrum. Specifically, the stages were defined as follows:

- **Brownfield Investments** These investments are well established cash-flow generating assets, such as fully operating and stabilized toll roads. They are perceived to be one of the lowest risk assets for infrastructure investing. The typical Brownfield investment profile is perceived to be akin to a long-term bond, with an immediate and sustainable current coupon and a term of 15 to 30 years or more, with much of the overall return driven by current income.
- **Rehabilitated Brownfield Investments** These investments are effectively a blend of Brownfield and Greenfield risks and returns, typically involving projects that need significant capital for repairs and maintenance while simultaneously generating some element of current income from current operations. An example of a Rehabilitated Brownfield investment would be the purchase of concession rights for an operating toll bridge that, though currently generating cash flow, requires significant immediate capital improvements for major retrofitting or expansion.
- **Greenfield Investments** These investments are new projects that will not generate cash flow until completed. Such investments include design and build risk, as well as operating risk, and are often sold to Brownfield investors once the project is completed and stabilized. They are usually part of a long-term concession with the public sector that sets terms for the project's operation after it is completed. Greenfield investments typically require deal-generating skills that go far beyond bidding in auctions, requiring the ability to create and organize projects as well as operate them.

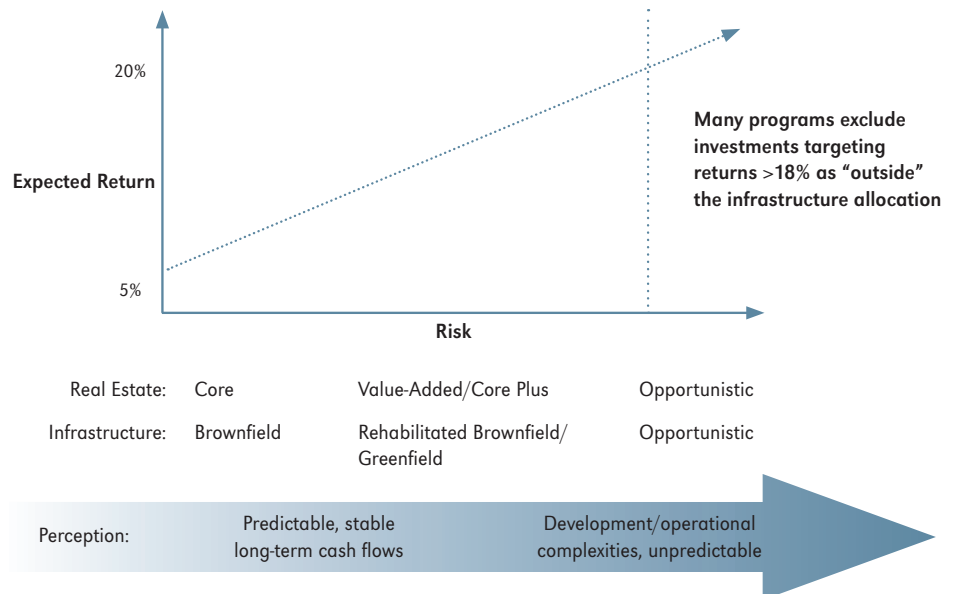
- **Opportunistic or Private Equity Infrastructure Investments** Opportunistic investments include capital committed to projects with significant operational or regulatory issues that need to be addressed before a project can be turned around or optimized, and Greenfield investments (such as merchant power plants) whose operations are not covered by long-term pricing or usage contracts at the beginning of construction. This strategy typically requires a high degree of operating and complex negotiation skills, with returns driven by capital gains rather than operating income.

A fund may include projects with a mix of these risk categories, though it is highly unusual to have a fund mixing Core Brownfield investments with Opportunistic ones.

While the definitions of the stages of infrastructure development remain valid today, the notion that they categorically define risk has proven untrue in the wake of the Global Financial Crisis. A number of theoretically “safe” Brownfield infrastructure investments acquired at the market peak in assets, such as toll roads, have proved to be much riskier than Rehabilitated Brownfield or Greenfield investments when too aggressively underwritten or leveraged.

A simplistic picture of the risk/return profile for infrastructure investments looks more like the spectrum of risks and returns applied to most institutional real estate portfolios, as described in Chart I. Some institutional investors will categorize funds targeting returns in excess of 18% as de facto private equity funds, more heavily focused on capital gains for returns rather than current income, and exclude such investments from their infrastructure allocations. Others include an opportunistic component to bolster the overall returns of the allocation and typically reflect this expanded definition of infrastructure in their benchmark for infrastructure investments.

Chart I Traditional Infrastructure Risk/Return Profile



Source: Probitas Partners

As discussed above, categorizing infrastructure investment risk simply through broad traditional stages fails to properly define the risk/return profile of individual projects. A Greenfield investment is not necessarily riskier than a Brownfield or Rehabilitated Brownfield project; it depends significantly upon specific risks and how the transaction is structured. Ultimately, the risk/return profile of each investment is a function of the structure of the investment and how that structure addresses a number of important risks, including:

- **Leverage** The risk in any project, beyond some nominal level, is inherently increased by the addition of financial leverage. Interestingly, since Brownfield projects are generally considered more stable, they are usually easier to leverage aggressively to generate higher returns on invested equity. However, any project that is highly leveraged inherently has less financial and operational flexibility, and for projects whose returns are generated through user fees or other contingent payments as described below, the combination of flawed revenue forecasts (or unanticipated economic downturns) combined with too much leverage can significantly increase risk and ultimately reduce or eliminate returns.
- **Elasticity of Demand** For those projects whose returns depend upon user fees, the demand for those services during the life of the contract drives the ultimate investment return. Even for a Brownfield toll road whose use characteristics are presumed to be well-known (thus, perhaps less risky than a Greenfield project), the availability of non-toll alternatives now or in the future, or the impact of either soaring fuel prices or steeply rising tolls on traffic can reduce actual revenue. As a result, a Greenfield social infrastructure project with well-defined contractual structures and availability payments may be inherently less risky than a toll road whose revenue streams are driven partially or completely by user fees.
- **Inflation** As with any long-lived asset, inflation can detrimentally impact profitability. This risk can be mitigated contractually through inflation adjustment clauses or in certain instances through contracts hedging key operating costs. In certain PPP contracts that are poorly structured or in highly competitive offerings, these risks can be borne in part, or totally, by the investor.
- **Political Risk** This is a broad area of risk, covering such issues as rejection of contracts, changing tax laws, currency risk (when the currency of the country where the project is located differs from the currency of the fund), political instability, sovereign credit risk, or potential civil strife. Thus, projects in emerging market countries are generally perceived to have a higher degree of risk than those in developed economies – though at times, political and economic problems can negatively impact projects in the developed world as well.

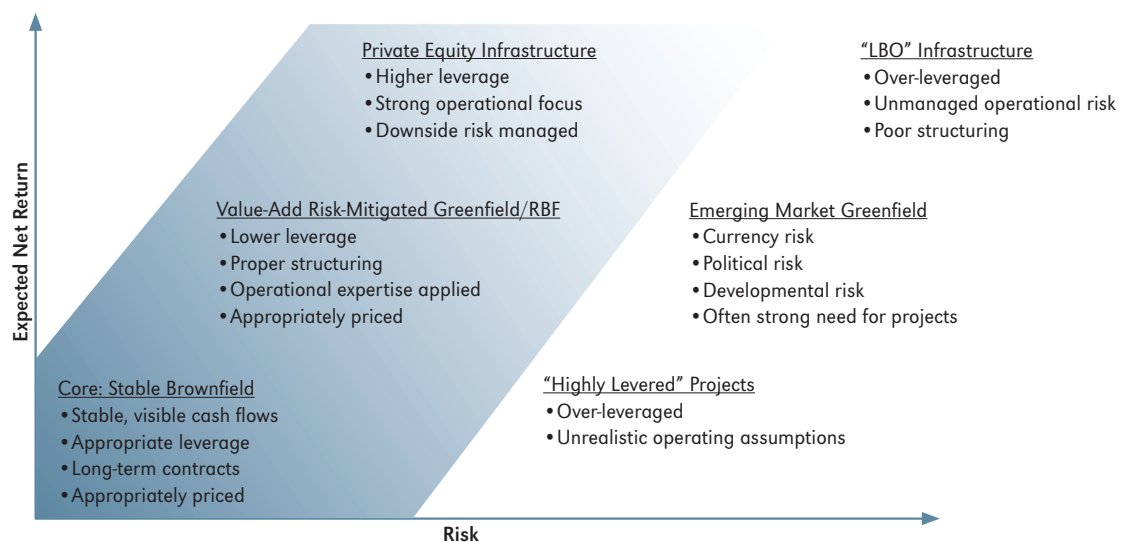
Additional risk factors that do not fit as neatly into a category are the mitigating impact of proprietary deal flow, operating expertise, and contractual risk assignment. In the Greenfield arena, fund managers have more of an opportunity to assist public sector entities in developing opportunities at an early stage, providing advice on how a project might be structured and helping to define the risks in a DBFO environment. To be involved in these situations requires not only a background in these key disciplines, but also a marketing program targeting these more proprietary opportunities in the development stage. Though most of these opportunities will go to formal bid, investors involved early in the process will gain insight into and knowledge of the specific priorities on the project which will give them a material advantage in the process and the ability to better

negotiate contracts and influence risk mitigation as part of their bid. In many Brownfield investments, contracts are established as part of an auction process focused on generating the highest bid for a concession. Potential buyers bid on a basic structure, which is not as negotiable and is more likely to include a number of bidders with strong financial skills, but not necessarily strong operating backgrounds resident on their teams.

Any particular infrastructure project can contain all of the risks noted above. But in Greenfield projects, risks are typically addressed in a specific structure designed by the sponsor to manage downside and enhance returns. The construction of the allocation of risks and the assignment of returns determine the actual risk/return profile of a transaction. Institutional investors increasingly appreciate that a fund sponsor constructing a portfolio of investments is ultimately building a portfolio of risks and related pro forma returns that require a balancing of all these factors in order to develop an aggregation of exposures which are meant to perform well as a whole.

Chart II illustrates a more nuanced view of the risk/return spectrum for institutional investors, taking into account the array of risks, mitigating techniques, and the resulting potential returns in each of the strategies. Depending upon the bundle of risks that are assumed on any investment and how they are mitigated, Greenfield projects can clearly be within an appropriate risk/return band – and be less risky than an over-leveraged Brownfield asset overseen by managers with little operational infrastructure experience. As discussed below, Greenfield and Rehabilitated Brownfield transactions also offer a better opportunity for a manager to define and negotiate terms that impact risk and return, in ways that are unavailable in most hotly competitive Brownfield auction transactions, where the terms are well-established and bidders are required to take and price a defined set of risks, rather than define the risks and then determine which of them they want and at what return and which they prefer to lay off or not accept at all.

Chart II Infrastructure Risk/Return Profile



Source: Probitas Partners

Bond-Like Is Not Risk-Free

A number of infrastructure investors learned painfully during the Great Financial Crisis that, while stabilized high-quality assets can generate “bond-like” return performance, such assets are not guaranteed or risk less. In periods of market turmoil, very low probability events can nonetheless occur (evaporation of debt capital, dramatic decline in user traffic, skyrocketing energy costs, etc.) which can cause stable assets to underperform or even become distressed, if aggressively leveraged or poorly operated. Similarly, plummeting commodity prices (such as natural gas currently) can dramatically affect investments in both direct and allied sectors (for example, coal-fueled power plants) by affecting current operating revenue or by creating accelerated obsolescence.

Similarly, as assets mature, while their cash flow may become even more seasoned, they are increasingly at risk from disruptive technologies or changes in use that, while not envisioned at inception of the investment, may make the asset less valuable or valueless 25 years later.

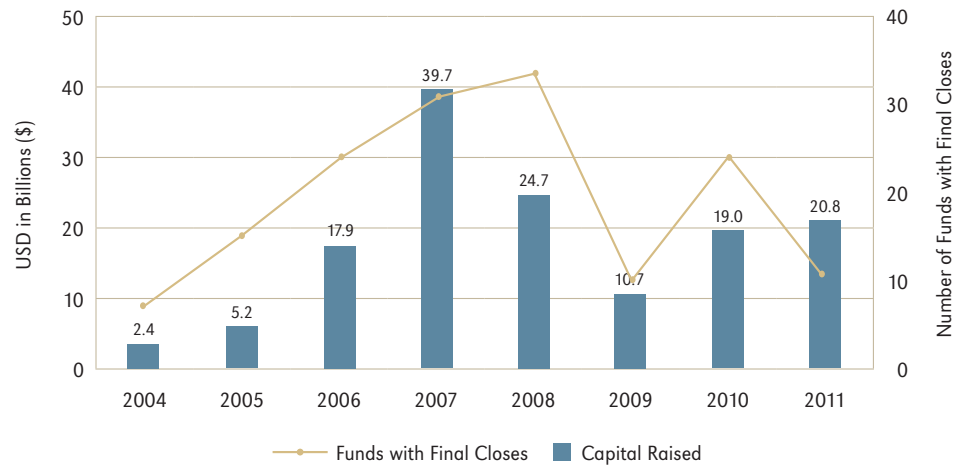
Some investors still believe that stable, monopolistic investments matched to their long-term liabilities mean they can rest easy for the next 30 years. Instead, manager selection that focuses on requisite risk evaluation and mitigation skills and ongoing active operating and management skills remains the route to achieving hoped-for long-term performance, regardless of the apparent stable nature of any infrastructure investment.

Drivers of Institutional Infrastructure Investment

Since 2004, the fundraising market for private infrastructure funds has expanded dramatically due to both increasing interest from investors globally and a steady supply of projects needing funding. The combination of these forces, coupled with abundant and inexpensive debt, drove closed-end infrastructure fundraising to a new high in 2007. The number of new funds in the market also peaked, as detailed in Chart III.

Fundraising fell dramatically in 2009 from the 2007 peak with the arrival of the Great Financial Crisis. But infrastructure fundraising rebounded over the next two years as markets stabilized and investors' interest in illiquid assets returned. As of March 2012, there were over 100 funds in the market seeking over \$90 billion in commitments compared to the \$20.8 billion raised in all of 2011. The next section expands upon drivers of infrastructure fund supply and investor demand.

Chart III Global Infrastructure Fundraising



Source: Probitas Partners, PREQIN, Infrastructure Investor, Private Equity Analyst
Note: Does not include infrastructure funds-of-funds

The Motivation to Invest

Institutional investors, especially pension and superannuation plans and insurance companies, are attracted to infrastructure investing for a number of reasons:

- **Asset/Liability Matching** For investors with significant long-term liabilities, investing in infrastructure allows them to match these liabilities to long-lived, stable, high-quality assets. Few assets can be as long-lived as contractual maturities on infrastructure concessions, and investing in core infrastructure can lessen reinvestment risk.
- **Current Income** Though the total life of many infrastructure projects is quite long, Brownfield and Rehabilitated Brownfield assets generate significant amounts of current income, both mitigating risk and attracting investors who seek an asset-backed alternative to fixed-income investing. However, investors need to appreciate that these long-term assets do require ongoing maintenance and reinvestment, so not all cash generated in excess of operating expenses and debt servicing is available for distribution.
- **Inflation Protection** Many infrastructure assets include inflation adjustment clauses in their pricing mechanisms, mitigating return dilution caused by inflation. For that reason, a number of investors place infrastructure in inflation-linked allocations along with such assets as timber and commodities.

There are other strategic motivations as well. For public sector pensions, investing in local infrastructure projects can boost local economies and help achieve public policy goals (e.g., increasing local employment) while at the same time investing pension dollars in assets that offer attractive risk/return profiles. Many Taft-Hartley plans in the United States, and their equivalents in other countries, look favorably on infrastructure investing as a way to potentially boost job prospects for members in construction trades while achieving similar investment goals.

Infrastructure and Economic Stimulus Programs

Besides the increasing recognition of the attractive attributes associated with infrastructure investing over the last decade, the supply of infrastructure investment opportunities has been increasingly driven by two other forces: the need for governments in developed countries to upgrade existing infrastructure while balancing their budgets, and the need for governments in the larger emerging markets to further develop their infrastructure to keep pace with their economic growth.

In the developed world, where most infrastructure projects have historically been funded by governments, stress on government budgets and credit ratings over

the last twenty years has led to a situation where many infrastructure assets have been under-maintained or have deteriorated significantly. Collapsing bridges and electrical blackouts have caught the public's attention and have led to a situation where, in the United States alone, engineers estimate that spending needed to rehabilitate deteriorating infrastructure exceeds \$2.2 trillion.

Since the advent of the Great Financial Crisis, government focus on infrastructure has both changed and intensified. In the current economic environment, many government agencies worldwide are backing infrastructure programs in order to stimulate their economies. Rehabilitated Brownfield and Greenfield investments are natural targets for stimulus programs as they inherently increase employment levels via new construction and subsequent operation. Since they are project-oriented, the effect on employment growth is temporary. While this does not permanently add to government employment, it theoretically achieves the goal of economic expansion by gaining the benefit of the "multiplier effect" as workers and suppliers spend earnings in the broader marketplace. Ultimately, most of these projects have long-term positive economic impacts, for example, in increasing transportation efficiency and lowering costs.

The U.S., Chinese, and Japanese governments announced major stimulus programs at the start of the Great Financial Crisis in which infrastructure for 2012 had a large part, and the most recent budget announced by the U.S. administration called again for increased infrastructure spending. Various governments in the European Union continue to administer existing programs, though in the UK there has been some debate about perceived excess private profits in past programs which may create downward return pressure for investments there.

It is significant, however, that these stimulus programs are not intended to replace private sources of capital in the market, but in most cases are meant to work alongside them in order to maximize the effect on the economy. Certain jurisdictions have been slow to formally adopt PPP programs because of concerns about how they will impact organized labor in some developed markets (a topic that is discussed in more depth later in this paper). But these stimulus programs have given additional impetus to the adoption of PPPs.

The current economic situation is also having an impact on Brownfield PPPs. A number of governments with attractive and well-maintained assets are considering selling concessions on them in order to generate cash to alleviate budget concerns. Though prices for these assets have declined modestly as the availability of debt has ebbed and the auction markets have cooled, in many cases sale of such assets is one of the few options available to governments to generate large amounts of cash.

Institutional Portfolio Considerations

Most institutional investors divide their portfolios into separate allocations in order to ensure proper diversification. Investments that do not clearly fit into an established allocation can have difficulty finding a home in an investor's portfolio. The following discusses various portfolio issues relevant to infrastructure investments.

The Issue of Portfolio "Fit"

A number of institutions, mostly from Europe, Canada, and Australia, have included infrastructure investing in their portfolios for a decade or more. A majority of institutional investors, however, have more recently launched infrastructure initiatives or are still evaluating the sector.

For most investors new to infrastructure investing, the hurdle issue is, "Where does it fit?" Even if an institution is leaning towards eventually setting up a separate infrastructure allocation, "toehold" positions are often done as a means of market reconnaissance, and these early investments are placed, at least on a temporary basis, into existing portfolio sector allocations. The existing allocation options most used for this approach are private equity or real estate, but the risk/return profile of the spectrum of infrastructure investments does not perfectly overlap with the profiles of either of these sectors.

We believe that infrastructure assets originate more like private equity transactions in the initial structuring phase and, in the case of Rehabilitative Brownfield and Greenfield assets, the DBFO phase. In contrast, infrastructure assets behave more like long-duration fixed-income assets or long-term leased real estate assets in the operations and maintenance phase or the post-completion phase and, when properly structured, are inflation-protected as well. Opportunistic investments in the sector, on the other hand, act more like private equity buyouts.

The key determinants of risk relate to contractual structure and timing. Assets that have completed initial structuring and formation, and are in the operating and maintenance phase (with consecutive quarters of stable operating history meeting or exceeding plan) are clearly more mature and less risky than assets that are in an early phase of validation (except where the structure of the deal includes availability payments or other forms of guaranteed payments). Assets that exist but require significant efforts to turn around performance are again in a different category.

Interestingly, the ultimate answer to where infrastructure "fits" for new investors is often colored dramatically by orientation. If the private equity team within an institution is asked to administer the infrastructure allocation or determine appropriate benchmarks and design a program, there is often an expectation of high teens-plus returns and shorter holding periods, more akin to private equity returns. This results in a bias towards higher-return oriented investments capable of generating such returns in shorter time frames. On the other hand, if the real estate team is given the same task, the performance expectations are often high-single or low-double-digit returns, more akin to core or core-plus real estate returns. The result can be a greater focus on investments in existing, stabilized assets with lower volatility, favorable risk sharing and risk mitigation arrangements, and more rigorous contractual definition with resultantly lower overall returns.

While infrastructure investments can share attributes of private equity and real estate, their proper characterization probably lie somewhere in-between existing allocations for most institutional portfolios. Most investors with sufficient time to study the space will come to recognize the unique nature of infrastructure investing and create, or migrate to, a stand-alone asset allocation with dedicated and experienced professionals.

A recent derivative of a dedicated infrastructure allocation and team is the establishment of an inflation-linked or inflation-adjusted program that can include assets such as commodities, timber, and infrastructure. A number of U.S. state funds have adopted this type of allocation including Oregon, Florida, and CalSTRS. Each of these programs has unique nuances but is generally a “pocket allocation” that does not naturally fit into other portfolio allocations today. The common feature for these investments is some form of perceived inflation hedge. Many infrastructure concessions include the contractual right to adjust tolling rates over time based upon a relevant inflation index, providing some protection in a rising inflation rate environment, unlike most fixed income bonds. This feature makes many infrastructure investments attractive for such an allocation, and institutional investors interested in such programs are building teams with some degree of infrastructure expertise dedicated to this sector.

Benchmarking

The history of infrastructure funds is relatively short and shallow compared to that of private equity or real estate funds. As a result, no source comparable to Venture Economics, Cambridge Associates, or NCREIF that provides robust return comparisons for these funds has yet developed. PREQIN, an on-line service that tracks individual fund performance through publicly available listings and Freedom of Information Act requests, tracks the performance of certain individual infrastructure funds and has begun to develop a benchmark. But that database still remains sparsely populated and has robust vintage year comparisons only for a few recent vintage years.

In the public markets, a few indices designed to track infrastructure returns offer a view of comparable investment performance. For example, Macquarie Bank and FTSE have combined to create a number of jointly provided indices covering infrastructure globally and in various regions. However, these indices are heavily weighted towards publicly traded electric, gas, and water utility companies that are not necessarily representative of the infrastructure sector in general. In addition, certain indices include “infrastructure linked” companies, such as publicly traded construction companies, that generate substantial revenue from infrastructure projects but are not true infrastructure vehicles.

Chart IV highlights the results of Probitas Partners' latest institutional investor survey on the topic of benchmarks. By far the most popular benchmark at the moment is an absolute return target. A number of survey respondents use multiple benchmarks. Those that use publicly traded securities indices most often use broad based indices such as the S&P 500 or the FTSE 100 and not specific infrastructure indices; many investors are developing their own internal proprietary benchmarks.

Given current investor focus on infrastructure opportunities with long-lived assets generating some amount of current income, we believe that both absolute and inflation-adjusted benchmarks are likely to become increasingly important. We also believe that as the market continues to mature and a deeper base of historical results is developed, vintage year analysis of returns for managers will become a more meaningful relative performance measure.

Publicly Traded Infrastructure Investment

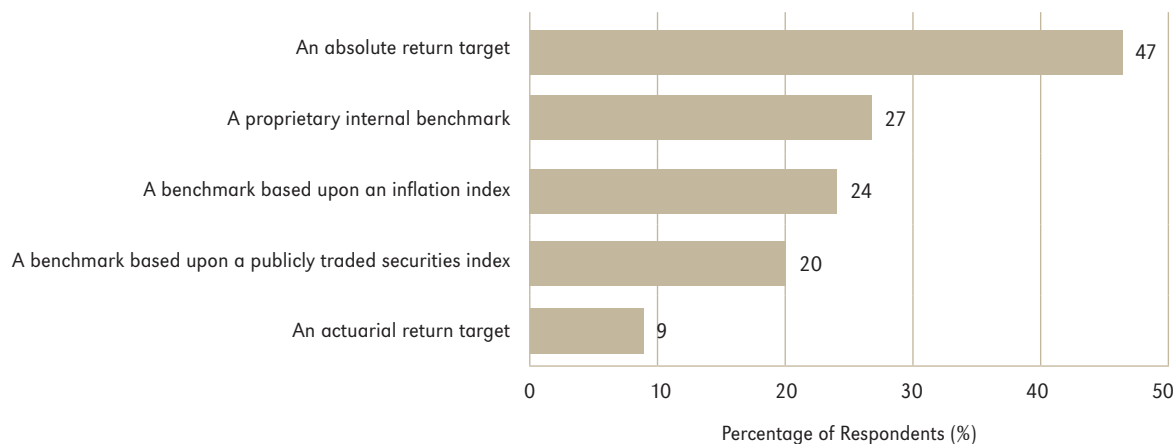
To date, most institutional investors have invested in infrastructure via private partnerships, co-investments or, less typically, via direct investments into projects. Certain investors also invest in the sector through publicly traded vehicles, though this is much rarer. Probitas Partners' 2012 investor survey learned that only 11% of respondents actively invest in publicly traded infrastructure compared to 55% that actively pursue private closed-end funds, 24% that actively pursue direct investments, and 16% that target co-investments.

Several issues face investors pursuing publicly traded infrastructure investments:

- **Allocation Definition: In Which Bucket Does It Belong?** Investment mandates for internal or external managers of an investor's publicly traded portfolio can be very broad; there is a likelihood that some of the most heavily traded infrastructure positions may already be in an investor's public portfolio. That is especially true when public utilities are deemed to be infrastructure investments, as they are in many of the existing indices or mutual funds in the sector. If the definition is expanded to cover "infrastructure linked" investments,

Chart IV Portfolio Benchmarks

"Regarding portfolio benchmarks for infrastructure, my firm uses (choose all that apply):"



Source: Probitas Partners' Infrastructure Institutional Investor Trends Survey for 2012

such as construction companies, it can exacerbate the overlap. For this reason, most investors do not have separate publicly traded infrastructure programs.

- **Thin Trading** Utility stocks are often included in infrastructure indices or mutual funds as they are typically very liquid and their pricing is robust. Though there are public infrastructure vehicles that are heavily traded, there are many listed though lightly-traded vehicles, often appearing on minor exchanges. This creates two problems:
 - **Market Volatility** Stocks that are thinly traded are often volatile and subject to increased pressure in difficult markets. Though there is a public price for the stock, it can be subject to price pressure driven by overall market activity as well as by technical trading issues quite separate from underlying valuation parameters.
 - **Lack of Liquidity** Investors with large positions in a thinly traded stock may have difficulty exiting a position, and pent up demand for exits can exert downward pressure on price.
- **Sponsored Vehicles** There are a number of publicly traded funds that are part of a fund family consisting of both public and private vehicles. Two major issues arise with these vehicles:
 - **Potential Conflicts of Interest** Historically, a number of publicly traded funds have purchased significant assets from privately held sister funds controlled by the same sponsor. This raises issues of potential conflict of interest between management and investors, not only in the pricing of assets, but also regarding fees; many infrastructure vehicles have fee structures which allow management (and thus their sponsors) to collect asset acquisition and disposition fees, and with inter-fund transactions these fees can be charged on both sides of a transaction.
 - **Sponsor Difficulties Affecting Vehicle Valuation** During the Great Financial Crisis, a couple of infrastructure firms that had sponsored a number of publicly traded infrastructure vehicles failed to service their debt and went into administration. These difficulties dramatically impacted the trading value of the public funds they sponsored, regardless of the performance of their underlying assets, and resulted in a scramble among those vehicles to separate themselves from their sponsors.

Investors interested in publicly traded infrastructure fund investing need to be aware of these factors when pursuing such a strategy, deciding how to treat an allocation and how to properly balance exposures across their entire portfolio. We expect that because of these issues, most programs will continue not to establish a separate allocation for publicly traded vehicles, but will focus predominately on private fund structures or co- and direct investments as they build expertise in the sector.

Fund Investment Considerations

Only a handful of the largest and most mature investment programs have dedicated direct and co-investment teams that can execute infrastructure investments. These large investors are often well-staffed with well-compensated teams and compete directly with the largest infrastructure funds — either alone or in consortia — for the largest infrastructure investments that come to market globally. Most investors who approach infrastructure investing for the first time do so necessarily through private fund structures, even if their ultimate goal is to establish active co-investment or direct investment programs.

Infrastructure Fund Landscape

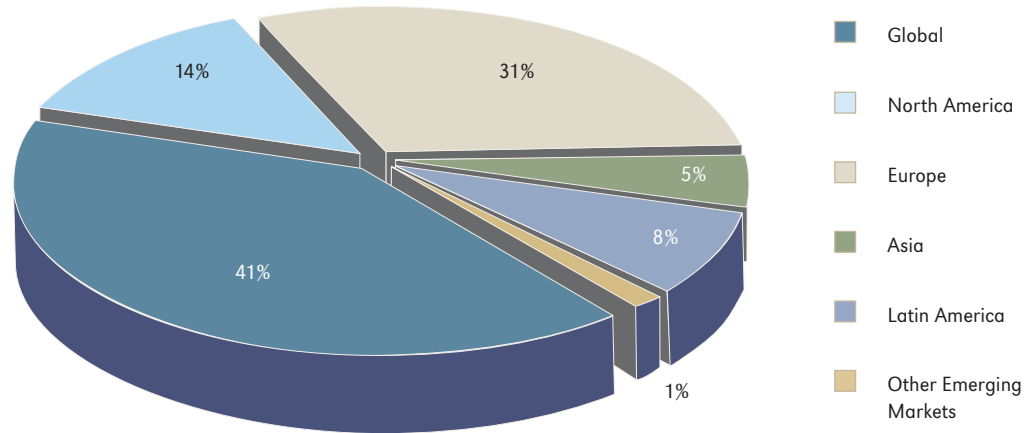
Since the majority of institutional investors today and well into the future will necessarily invest in infrastructure through traditional fund vehicles, this discussion focuses on issues that impact fund investing in infrastructure. Much of the analysis here is based upon information collected as part of our series of institutional investor surveys on infrastructure as well as direct discussions with some of the largest active investors globally.

As detailed previously in Chart III, nearly \$21 billion in commitments was raised for infrastructure funds in 2011. Chart V provides details on the geographic focus of the funds raised. Most of the funds with global strategies are heavily focused on developed markets — when combined with the funds focused on Europe and North America, over 80% of the money targeting infrastructure is focused on the developed markets. The European market is the deepest, with a long history of PPP investing and a strong base of investors interested in the sector. Most funds targeting developed markets are focused on Brownfield or Rehabilitated Brownfield investments, while the emerging markets are inherently more focused on Greenfield transactions.

The largest sector of investor interest in 2011 was in Brownfield/Greenfield strategies, though most of these funds are focused on Brownfield investments and only occasionally do Greenfield deals. There are relatively few Opportunistic funds, but they tend to be larger vehicles that raise significant capital, often with both a focus on energy investments and strong support from private equity investors. Renewable energy funds are another crossover sector, attracting support from infrastructure investors because of their risk/return profile as well as from investors looking to support Cleantech/Green investing.

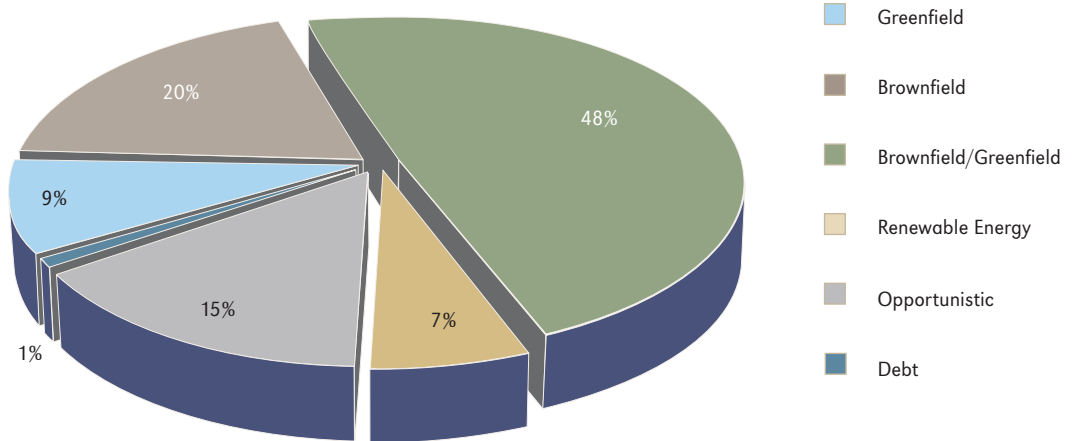
The smallest sector is debt-focused funds, a newer sector that has come into play only since the Great Financial Crisis but one that has still not attracted a great deal of capital. The risk/return profile of debt funds is most like Core Brownfield equity funds, but with actually lower returns and theoretically more modest lower risk.

Chart V Infrastructure Fundraising in 2011 by Region
(In terms of Capital Raised in U.S. Dollars)



Source: Probitas Partners, PREQIN, Infrastructure Investor, Private Equity Analyst
Note: Does not include infrastructure funds-of-funds

Chart VI Infrastructure Fundraising in 2011 by Strategy
(In terms of Capital Raised in U.S. Dollars)

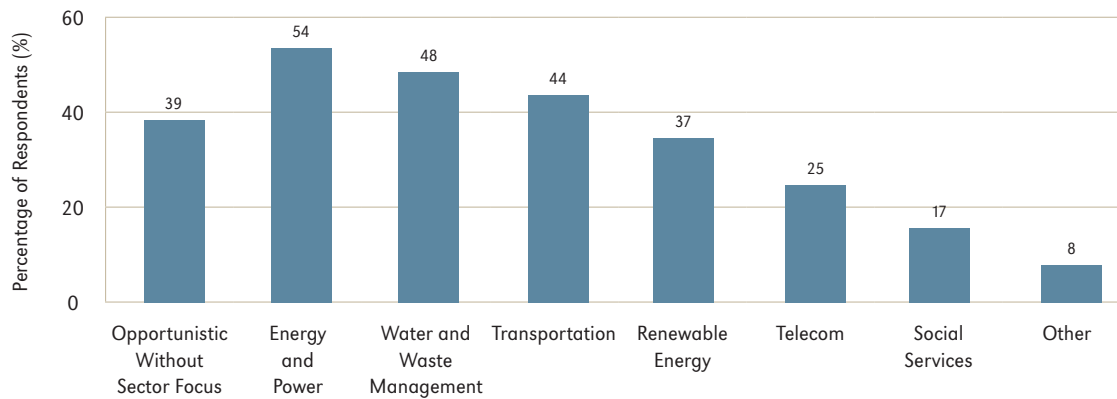


Source: Probitas Partners, PREQIN, Infrastructure Investor, Private Equity Analyst
Note: Does not include infrastructure funds-of-funds

Though many of the larger funds in the market are widely diversified by industry sector, there are a number of funds that are narrowly focused on a sector or two: Energy & Power, Waste & Water Management, and Transportation are the sectors given the most focus. Social Services (such as Hospitals, Education, and Public Housing) have only limited appeal; this sector is of more interest to European investors while being of little interest outside of Europe.

Chart VII Infrastructure Industry Sectors of Interest

“Within infrastructure, my firm is actively interested in investments or funds focused on (choose all that apply):”



Source: Probitas Partners’ Infrastructure Institutional Investor Trends Survey for 2012

The ten largest infrastructure funds raised to date, referenced in Table I, offer an illustration of the most popular fund vehicles historically.

Table I Ten Largest Infrastructure Funds, March 2012

Rank	Fund Name	Firm Name	Location	Fund Vintage	Amount (MM)
1	GS Infrastructure Partners I	GS Infrastructure Investment Group	New York	2006	USD 6,500
2	Macquarie European Infrastructure Fund II	Macquarie Infrastructure and Real Assets	Sydney; London	2006	EUR 4,635
3	Global Infrastructure Partners	Global Infrastructure Partners	New York	2008	USD 5,640
4	Energy Capital Partners II	Energy Capital Partners	Short Hills, NJ	2009	USD 4,335
5	Alinda Infrastructure Fund II	Alinda Capital Partners	New York	2008	USD 4,097
6	Macquarie Infrastructure Partners	Macquarie Infrastructure and Real Assets	Sydney; London	2006	USD 4,000
6	Morgan Stanley Infrastructure Partners	Morgan Stanley Infrastructure	New York	2008	USD 4,000
8	Highstar Capital Fund III	Highstar Capital	New York	2007	USD 3,500
9	Citi Infrastructure Partners	Citi Infrastructure Investors	New York; London	2008	USD 3,400
10	ArLight Energy Partners V	ArLight Capital Partners	Boston; London	2011	USD 3,310

Source: Probitas Partners

There are a number of similarities among these large funds:

- **All Are Focused on Developed Countries** Most of the capital currently being committed is directed at the European and North American markets, even within funds that have global investment mandates. However, there are a significant number of smaller funds focused on investing in India, Brazil, and China.
- **Sponsored Vehicles** Many of the largest funds in the market are or were sponsored by large financial institutions, and many of these funds ran more like a division of an investment bank than an independent fund manager. However, the difficulties experienced at financial institutions since the Great Financial Crisis, together with new regulations that pressure banks to reduce on-balance sheet exposure, have made sponsorship less attractive, especially since investors prefer independent vehicles. Even without the impact of the new regulatory world, constrained balance sheets at financial sponsors, limit their ability to provide cornerstone capital commitments, working capital, and pre-specified portfolios to attract investors, and make their sponsorship much less attractive to fund managers who have been able to build quality track records over the last several years. As a result, both experienced individuals and entire teams continue to spin out to create independent groups.
- **Brownfield and Rehabilitated Brownfield Investment Strategies** Most of these funds target Brownfield or Rehabilitated Brownfield investments across a number of industry sectors and only occasionally pursue Greenfield transactions. Certain of these funds do pursue Opportunistic investments that require substantial repositioning, targeting investments with a higher risk/return profile, and often have a strong focus on the energy sector. Besides these large vehicles, there are also, of course, a number of smaller funds in the market. Most of these funds have either a narrow industry sector or geographic focus.
- **Pre-Financial Crisis** All of these funds except the last, ArcLight Capital, were effectively or actually raised before the Great Financial Crisis when it was easier to raise capital. ArcLight, which completed fundraising last year, demonstrates that the market is beginning to rebound to allow larger fundraises, at least for seasoned teams and vehicles.

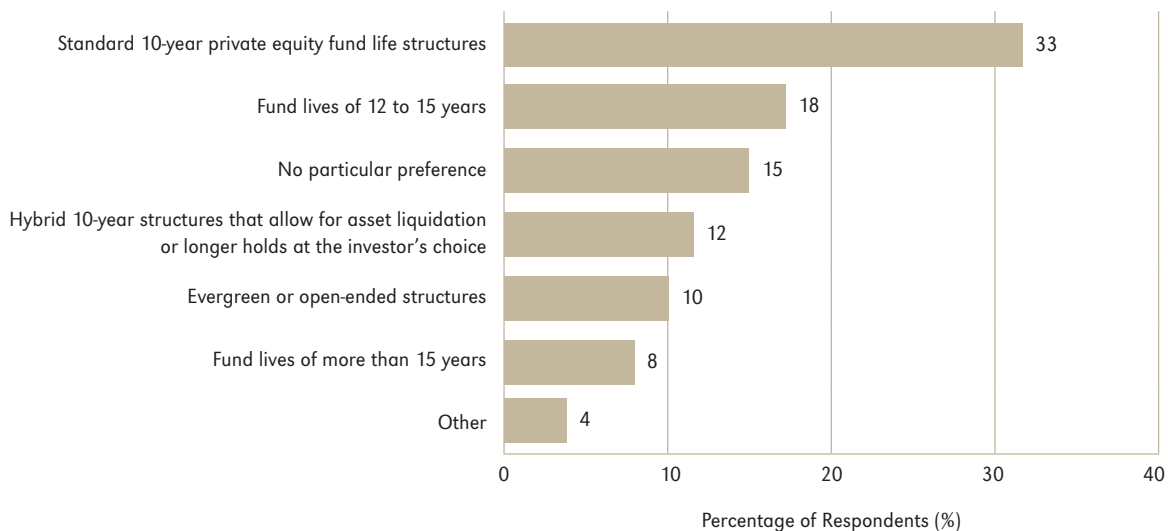
Fund Duration

There is no clearly established standard for fund duration today, as there is in private equity with its usual 10-year maturity. Instead, different vehicles handle duration in very different ways.

As detailed in Chart VIII, the typical 10-year life private equity vehicle continues to be the most common in the market today and has won broad acceptance from newer investors that are familiar with private equity and opportunistic real estate funds. Experienced investors with more mature portfolios often complain that such vehicles seem inappropriate for investments whose underlying maturities may be 15 to 30 years, or more. These more mature investors often seek to continue exposure to contractually well-defined and stable assets for as long as possible — well beyond a typical 10-year fund life. To address this issue, some vehicles now offer 12- or 15-year maturities, providing a more efficient holding period for assets with inherently long duration. These elongated maturities were the second most favored vehicle in our recent survey.

Hybrid structures, favored by 12% of respondents to our survey, were designed to invest across the infrastructure risk/return spectrum, aggregating investments with both shorter and longer maturities. Greenfield investments can be sold once they are completed and stabilized (generating higher IRRs than if held to ultimate maturity), while other projects with naturally longer maturities are often either transferred at the end of the life of the vehicle to limited partners focused on long-tailed returns, sold to other investors, or transferred to vehicles affiliated with the firm and sponsor, resulting in longer durations and moderated economics to reflect a more passive, stabilized role.

Chart VIII Preferred Terms and Fund Structures
“Given the duration of underlying infrastructure assets, the preferred term of the private infrastructure vehicles we invest in is:”



Source: Probitas Partners' Infrastructure Institutional Investor Trends Survey for 2012

In some cases the transfer between affiliated shorter-term oriented funds and longer-term affiliated vehicles has caused significant conflicts for fund sponsors. As a result, funds that include such features appear to have either lost institutional support because of the risk of fiduciary liability in the case of such obvious conflict, or gained much greater scrutiny and now include significantly greater limited partner protections in the event of such transfers.

Still, no common methodology has emerged to address the most difficult conflict issue: pricing of positions upon transfers to affiliated entities when some investors want to continue their exposure and others want to cash out. Some newer funds have set up sales mechanisms to affiliated vehicles with some element of third-party validation, usually through buying a portion of the transferred asset. Other evolving structures include opt-outs at the end of the fund life for shorter-term investors and similar structures that seek to offer shorter-term investors a contractual right of realization while reserving longer-term investors the opportunity to stay with assets they know for a longer horizon. Given the divergent interests of new and mature investors regarding shorter and longer-term holds, respectively, this will continue to be an issue that fund sponsors will seek to address with greater flexibility for both parties at the realization of an asset.

Open-ended or evergreen structures are favored by some investors as a natural vehicle for long-tailed assets. However, these vehicles create policy and legal difficulties for others whose alternative programs prohibit them from investing in partnerships without a fixed and limited duration – the primary reason they are not adopted by a wider investor universe. But there are other issues: exit mechanisms for open-ended vehicles that allow investors liquidity after a set period can be impacted by the same pricing issues that affect hybrid vehicles. Many funds that include an open-ended structure have been targeted at retail investors who seek a bond alternative with some upside potential, though these structures are also favored by a number of experienced investors in Australia and Europe. Ultimately, by the nature of these structures, they provide current income for new investors, a pre-specified existing base of investments that allows visibility and mitigates the J-curve, and liquidity potential via a redemption facility. Most of the open-ended structures carry a lower fee and carry structure that contemplates a very long-term hold by investors. This has become a more attractive structure for investors who intend to match liabilities long-term, but who still seek a liquidity option for unforeseen circumstances.

A major issue for open-ended structures that charge carried interest is how that carry is calculated. Since they are not publicly traded and they are geared towards holding assets for a very long period, any carry paid to the management on an interim basis has to be done on the basis of a Net Asset Value calculation. The mechanics of such a calculation and the mechanics of a distribution waterfall can vary significantly from fund to fund, with some being much more investor-friendly than others.

None of the approaches noted above has become the dominant investment structure in the market, and the different structures available reflect the differing needs, desires, and sophistication of investors, as well as the varying natural maturity structures of investment opportunities. Interestingly, in talking with experienced investors we found dissatisfaction with the attributes of most of the structures that currently exist, but no consensus around a preferred approach go forward.

Liquidity

An important issue for investors is how they will deal with the ultimate liquidity of their fund investment if, at the end of a partnership's stated life, a significant number of positions remain in portfolio. Most private equity funds allow for extensions of a partnership's life for one to three years in one fashion or another. These extensions are meant to deal with small, tag-end positions that may not be ready for exit, rather than a larger portfolio of naturally long-lived assets. The hybrid and open-ended structures described above are meant to address this issue directly, but have failed to gain wide acceptance, especially with newer investors, because the structures are inconsistent with many institutional investors' current preferences or delegations of authority.

General partners can always elect to sell individual positions in their portfolios. Potential purchasers of these positions include:

- **Strategic Acquirers** Depending upon the sector, there may be strategic acquirers looking to build their base of assets or contracts in order to gain scale; for certain projects they may represent attractive buyers.
- **Sophisticated Primary Investors** Many of the primary investors active in the market are large, sophisticated investors — such as public pension plans — with strong appetites for cash-generating, contractually-defined investments that are likely to be the kind held in a fund at the end of its life. A number of these investors already have active co-investment and direct investment programs that make excellent targets for such sales.
- **Specialist Vehicles** A number of specialist vehicles (such as publicly traded vehicles or specialist secondary funds) actively look to purchase positions that fit their portfolio needs. Given the cash flow profile of more mature investments, we continue to believe that structured or securitized vehicles will continue to be created in the future, targeting acquisition of these types of assets as the market matures.

The sale of partnership positions, as distinct from the sale of underlying transactions in a portfolio, is always an option for investors in a fund. However, since infrastructure is a relatively new asset class, secondary sales of partnerships have so far been limited. As the primary market develops and deepens, however, we expect that the secondary market for these interests will deepen as well, with likely interest coming from both sophisticated primary investors and specialist vehicles.

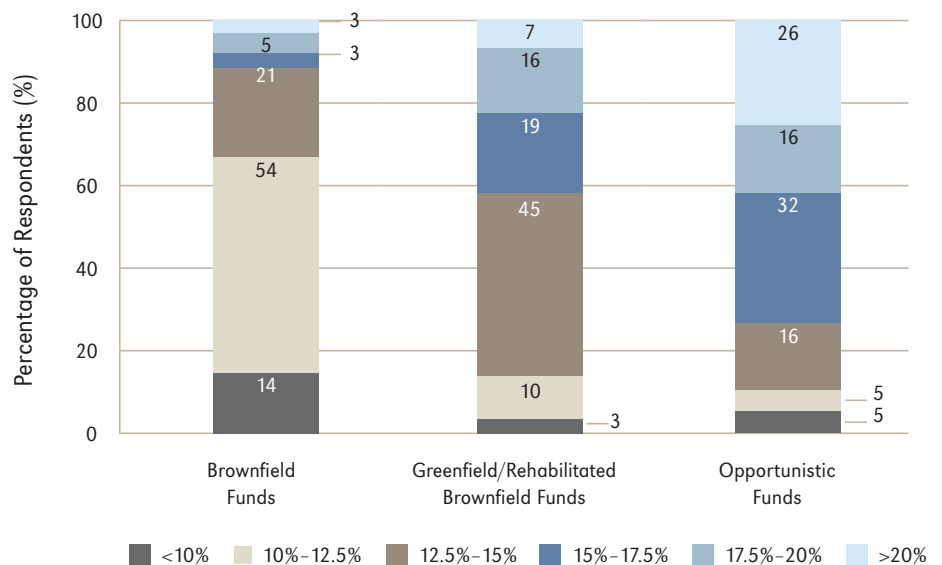
Pricing

When the infrastructure fund market first began to expand rapidly in 2004 and 2005, most of the private infrastructure funds offered in the market were priced roughly in line with the “2 and 20” private equity pricing model (2% management fee and 20% carry). As noted previously, many of these funds were focused on Core Brownfield investments in the developed markets. Without large amounts of leverage that would raise their risk profile, these funds would typically generate net returns in the range of 10% to 12% over their lives. Since the Great Financial Crisis, institutional investors have increasingly taken the position that the return profile and operating and management intensity required of this style of infrastructure investing does not justify that level of fees and carry, and are heavily pushing for lower cost structures, with increasing success.

However, as discussed previously, funds with different strategies have very different risk/return profiles. What we continue to see is that on a simplistic basis, unadjusted for leverage, operating or country risk, investors expect higher net returns on riskier strategies as noted in Chart IX. Notably, these return expectations are net returns — returns after the payment of fees, expenses, and carry.

As investors continue to better understand the tiered nature of risk in different infrastructure investment strategies, pricing in terms of management fees and carry will likely be properly tiered as well, much as it is in the real estate fund market. Funds strongly focused on Brownfield investing in the developed markets — generating large portions of their return from current income, and with modest operating requirements — are evolving into structures more in line with those of Core real estate funds. On the other hand, those funds creating significant value by pursuing proprietary deals in the Rehabilitated Brownfield and Greenfield spaces targeting mid-teen IRRs are being priced more like Value-Added real estate vehicles, while Opportunistic strategies targeting returns of 20% and above will more closely follow the private equity economic model.

Chart IX Targeted Returns for Infrastructure
“For the major sectors of closed-end infrastructure funds operating in developed markets, my targets for net IRR are:”

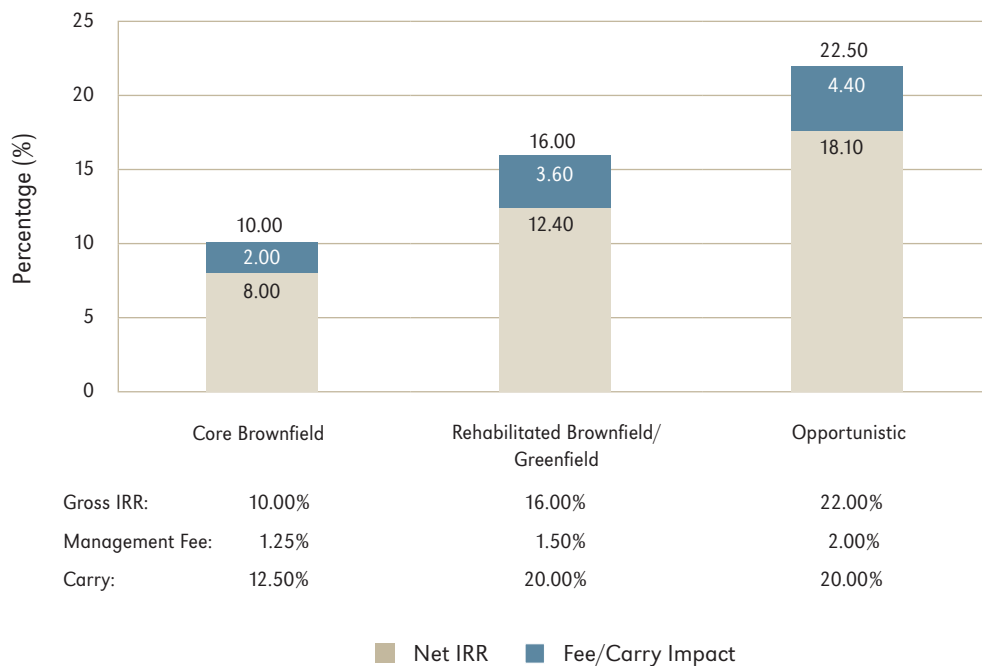


Source: Probitas Partners’ Infrastructure Institutional Investor Trends Survey for 2012

Chart X provides, on a simplistic basis, comparative Gross and Net IRRs for a series of funds with different risk/return profiles and tiered fee structures. It clearly shows that funds staffing up to pursue more value-added strategies likely to generate higher returns can justify higher levels of fees and carry while still achieving targeted net returns.

Investors who insist on fee and carry structures appropriate for Core Brownfield strategies across all infrastructure fund strategies may lose the potential to generate strong net returns on Opportunistic funds by investing with less-proven managers – those willing to accept below market terms – or managers not properly staffed to address the increased expertise and risk associated with their strategies, while simultaneously increasing their risk. Thus, investors who seek to gain value-added exposure via managers focused on Rehabilitated Brownfield and Greenfield strategies who add value at origination or via operational expertise would be short-sighted to insist on fees and carry appropriate to a passive Core Brownfield fund strategy, since Greenfield and Rehabilitated Brownfield strategies are inherently more specialized and resource intensive. One needs a deep bench of capable professionals with broad experience to properly staff a Greenfield focused fund or a Rehabilitative Brownfield fund, whereas a smaller, less diverse team of senior professionals is more appropriate to more passively managed stabilized Brownfield assets.

Chart X Fees for Infrastructure Funds, Net IRR as Function of Fund Type and Fees



Source: Probitas Partners

In addition to the headline numbers, the implementation details of these fund economic structures are important to understanding the true net economic impacts for a fund investor. The important nuances of infrastructure fee structures include:

- **Calculation Basis for Management Fees** Certain structures charge fees based upon fund NAV, as opposed to the private equity model, where fees are charged on the commitment amount during the investment period and on the cost basis of outstanding investments thereafter. Though such a structure can result in lower management fees early in a fund's life, it does provide an incentive to the fund manager to deploy capital rapidly no matter the environment, and as the NAV of the fund grows so does the fee amount being paid on a percentage basis compared to the original commitment.
- **Acquisition and Disposal Fees** In structures more akin to the early days of the real estate fund industry, certain funds charge acquisition and disposal fees, or even financing fees, that are for the account of the fund manager, not the fund, thus driving up investor costs and distorting alignment of interest.
- **Preferred Rates of Return or Hurdle Rates** Certain funds provide preferred rates of return for investors that are more attractive than others, while others provide for a hurdle rate that investors must achieve before the fund manager receives any carry beyond that preference.
- **Carry Calculation and Distribution Methods** Certain vehicles that are longer-lived calculate and pay carry on a valuation basis instead of a distributed cash basis, and investors need to be comfortable both with carry calculations and "high water mark" or clawback provisions on these structures. Funds that charge management fees on NAV are de facto charging a carry through that structure.

In any negotiations concerning a Limited Partnership Agreement, investors should seek a package of terms that accomplish an alignment and motivation to achieve the announced strategy, not just simplistically "2 and 20" or "1 and 10." That is especially so in infrastructure fund investing, and investors need to holistically review the package of terms and governance provisions that will comprise the investment relationship.

There is no single "right" or "market" fee and carry structure today for infrastructure funds; a single, uniform structure simply does not reflect the varied risk/return profiles found in various vehicles employing various strategies. Investors need to gain comfort with the investment manager and strategy of a fund on which they are performing due diligence, and they must also be comfortable with the package of terms and conditions being presented to ensure both alignment of interest between the parties and an ability to appropriately staff and execute the manager's strategy.

Available Fund Managers Capabilities

The pool of experienced managers within the infrastructure sector remains extremely shallow relative to the opportunity, especially those targeting the U.S. market. The largest share of talent continues to come from the investment banking world, where most professionals gained experience arranging debt financing for large infrastructure projects around the world. However, as the industry matures, a growing cadre of talent is developing in existing funds and within institutional investor teams. Not surprisingly, with most of the experienced personnel coming from the investment banks to date, many of the vehicles raised the past ten years have been investment bank sponsored funds that sought third-party capital or teams from these banks spinning out and going independent.

In selecting a fund manager, investors need to focus on the following:

- **Investment Backgrounds** Infrastructure investment is a rapidly growing area, and many of the funds active in the sector continue to be first-time or second-time vehicles. There are relatively few investment professionals in the sector that have long, attributable equity investment track records, much less strong performance given the impact of the Great Financial Crisis. As indicated above, many of the professionals focused on infrastructure investing today have deeper backgrounds as debt investors or arrangers of debt in the sector and secondarily as members of larger teams from within institutional investors where attribution for decision-making is typically unclear. Ultimately, investors will have to vet each team in the context of their announced strategy and the skill that they collectively bring to execute that strategy.
- **Quality of Track Records and Attribution** Since the infrastructure sector is rather new, few investment professionals have long track records. In addition, investment professionals spinning out of financial sponsors often find it difficult to get formal attribution from their previous employers. The combination of these two factors means that investors will be required to dig more deeply than usual in the due diligence process and will often need to make hard decisions based on team skill set and references, rather than on audited track records.
- **Operational Experience** Though investment professionals with deep equity investment experience in the sector are few, most general partners bring operational and financial expertise in the sector. Those with longer and varied backgrounds in the sector, through different cycles and in different geographies or areas of specialization, are more likely to have the requisite skills and experience to perform well in the future.
- **Sourcing/Deal Creation Experience** Brownfield deals, given their scale and the frequent involvement of public entities, are likely to continue to be predominately offered via auctions where the opportunity to create value via proprietary sourcing remains limited. Greenfield and Opportunistic deals, and Rehabilitated Brownfield deals to a lesser extent, are much more susceptible to value creation at inception, with an ability to develop deal flow that is much more proprietary. In addition, by being involved early in the process in developing Greenfield deals, managers with the right skill set can negotiate contractual protections in projects that materially mitigate risk.

Quality managers who understand how to work with public and private entities to develop investment opportunities, or those skilled at best leveraging the public market process to create advantage for their investors, will be able

to demonstrate relatively outsized returns via this skill set. Investors need to assess the need for these skills in light of a fund's announced strategy and compare it with the talents assembled to achieve the goals.

- **Sponsored vs. Independent Vehicles** A number of large financial organizations have extensive histories in infrastructure fund sponsorship, but their sponsored vehicles also face potential conflicts of interest that concern investors. Of special concern is team stability: investment professionals at a number of large sponsored vehicles are employees instead of partners, with little personal stake in the carry of the fund or even a measurable nexus in their compensation to the fund's performance. Additional conflicts of interest exist where sponsoring entities generate significant fee revenue from originating, financing, selling, or managing underlying investments, especially when such entities have competitive investment vehicles or affiliated vehicles into which assets are transferred. Ultimately, the greatest concern for investors considering a sponsored vehicle is how the management of long-term assets will be handled if the team leaves or is fired? While investors can cease funding additional capital commitments during the investment period under most limited partnership agreements, that does not address the issue for the decade or more that follows; linking the team's compensation to the performance of the underlying assets remains a critical part of the contract between the parties ensuring long-standing alignment of interest.

Co-Investment and Direct Investment

New and established investors' goals and objectives for infrastructure investments can vary widely. At the simplest level, an investor such as a pension plan, seeking exposure to stable cash flow from an inflation-hedged, long-tailed asset, may find infrastructure inherently interesting to match with similar maturity liabilities and be willing to pay the fee and carry of a fund structure to gain such exposure.

Large institutions with significantly more experience in the sector and the resources to maintain large internal teams may only look at fund investing today as a means of enhancing co-investment deal flow in order to expand exposure at a reduced cost. In the earlier days of the development of an infrastructure program, gaining some leverage from the investment team of a fund that the investor has backed is often looked at as a stepping stone to a more independent direct investment program. Geographic familiarity, unique industry, and local or regional knowledge and relationships will continue to play an important role in origination and diligence. Unique geographic and industry knowledge and relationships, along with skill on the part of fund managers can benefit even the most seasoned institutional investor teams.

As far as direct investment programs are concerned, very few investors have the resources to acquire and maintain the large, dedicated staff necessary to properly execute such a program and oversee investments made over time. These programs tend to be focused on Core Brownfield investments that are somewhat less complex to execute and usually pursue long-lived assets meant to be held on balance sheet for a long time. These investors often compete with fund managers for transactions, but often partner with them as well, as part of investment syndicates on large transactions.

However, the vast majority of institutional investors lack the resources either to underwrite or make timely commitments in co-investments, let alone direct investments. Even those with strong co-investment appetite often lack the specific

infrastructure experience and capabilities required to expeditiously diligence and evaluate infrastructure co-investments. As a result, only a small — albeit growing — universe of very large institutional investors actually have the capability to execute infrastructure co-investment or direct opportunities on their own.

For smaller and medium-sized funds, or larger funds new to the sector, providing co-investment opportunities to larger limited partners in a fund can be beneficial. By having a ready and willing source of capital in the form of existing fund limited partners, the fund sponsor effectively has a larger checkbook than represented by the fund alone and can therefore more effectively negotiate and win larger transactions without having to seek co-investment from non-affiliated investors or from competitive infrastructure funds. This can create benefits for all limited partners of the fund.

One last point needs to be made. Though the impetus for creating co-investment and direct investment programs within institutional investors was to increase net returns by decreasing fees paid externally, a number of investors are finding that is not necessarily the case. Especially in the case of direct investments, the cost to hire and retain staff in competition with the broader capital markets is significant. In addition, the expense of due diligence and the relatively high “dead deal” costs in a very competitive Core Brownfield add to the significant overhead burden of running a program. The Great Financial Crisis has revealed that investing in infrastructure directly is not riskless and that losses can also be a cost of such a program, especially since positions in these direct portfolios tend to be more concentrated and a single loss can have consequential portfolio impact.

The Influence of Organized Labor in Infrastructure Investing

Organized labor impacts infrastructure investing in the developed world in several ways, and trade-union-linked pension and superannuation plans are becoming increasingly important as investors. The following are their distinctive profiles:

- **Trade Unions in the Construction Trades** The construction trades, even in the United States where the importance of organized labor in the private sector has been declining, are heavily unionized. These unions see the advent of increased infrastructure investing as an opportunity for their members for increased employment via Greenfield and Rehabilitated Brownfield investments.
- **Trade Union Pension and Superannuation Plans** These pension plans (governed in the United States by the Taft-Hartley Act) are natural investors in long-term assets, and a number of them are either active investors in infrastructure or are considering investments in the sector. Many of them perceive private infrastructure investing as relatively friendly to organized labor because of the potential for creating jobs in the construction trades, in addition to the ability of the sector to create attractive returns for pensioners’ money.
- **Public Sector Pensions** To date, some of the largest investors in infrastructure have been large public sector pensions. Many of the members of these pension plans are members of unions, and the boards and investment committees of these plans are often composed of a combination of union representatives, management, and government officials. Some of the beneficiaries of these plans are also employed directly in current infrastructure operations (as toll booth operators, for example) as well as in construction trades.

The primary focus of the pension plan managers is their fiduciary responsibility to their beneficiaries. They are tasked with generating the necessary returns to provide the promised benefits to plan participants. However, typically they are unwilling to make investments that in some high profile manner are perceived to undermine the current interests of their beneficiaries, such as investments that result in job losses for plan members.

Just as the risk/return profiles of Greenfield and Brownfield investments are very different, they are also perceived differently by some members of organized labor. Greenfield investments are clearly perceived positively as potential new job creators. Brownfield privatizations are typically more controversial, as established assets with long operating histories are either sold outright or contracted through concessions with private operators. As one would expect, Rehabilitated Brownfield projects are a mix of both of these, with some degree of new construction job creation due to extensive repairs, followed by the transfer of the assets or concessions to the private sector. Global infrastructure investment patterns and trends over the last twenty years suggest that, in the realm of public projects, Rehabilitated Brownfield and Greenfield projects are likely to exceed Brownfield privatization and concessions in both number and amount of funds deployed over time.

The UK experience with labor protection standards offers one of the more meaningful case studies for the effect of privatization on labor employment. As a matter of public policy, the government of the UK has made it clear that the potential to bring improved value to public services with greater quality and innovation in infrastructure projects should not be at the expense of labor. As a result, the government has formalized labor protection standards that require private operators to offer jobs with compensation and benefits that are comparable to the public sector. However, comparability in the UK does not constitute guaranteed employment, as the private sector is left to its resources to evaluate workers and seek productivity improvements in the DBFO elements of infrastructure projects. In the UK to date, the government has generated greater efficiencies through PPPs while continuing to pursue a strategy of enhanced worker protections and ensuring fair and reasonable treatment in infrastructure projects.

So far, the situation in the United States has not produced a unified approach. PPP rules are being put in place on a state-by-state basis, and in many cases are still evolving. At the same time, certain Taft-Hartley and public pension funds have taken it upon themselves to adopt forms of Responsible Contractor Policies (“RCPs”) covering infrastructure investing for specific-fund investments they pursue. Though RCPs provide a generally labor-supportive framework, it is not uniform and remains subject not only to negotiation but interpretation in implementation. As a result, different infrastructure vehicles can find themselves subject to different self-imposed restrictions regarding their use of labor depending upon whom they have accepted as investors and what specific RCP language they have agreed to follow. This is a concern for many fund managers and should be of concern to investors as well, if the fund’s adopted RCP language results in a competitive disadvantage compared with other funds.

Conclusions

Infrastructure investing continues to evolve as a recognized allocation within institutional investors' portfolios. It is gaining momentum for three reasons:

- *Strong demand by institutional investors (especially pension plans) for current-income generating, long-term assets that better match their long-term liabilities;*
- *A need for governments worldwide to find alternative financing methods to build, maintain, and operate public sector infrastructure; and*
- *Increased government support for infrastructure programs as part of economic stimulus programs as well as inherent need in many developed countries to reinvest in decaying infrastructure assets.*

This momentum was slowed by the Great Financial Crisis and its impact on investors' illiquid alternative investment allocations. Though the demand for infrastructure funds has rebounded post-Crisis, there have been several potential longer-term impacts:

- *Fund investors are demanding lower fee and carry structures, especially for Core Brownfield funds;*
- *Fund pricing is becoming more tiered, with higher risk/return, more operationally-focused strategies able to maintain premium pricing relative to more passively-managed Core Brownfield strategies;*
- *The largest, most experienced investors with substantial internal resources will increasingly pursue direct investments in the sector, in competition or in cooperation with fund managers; and*
- *A few fund managers are beginning to raise infrastructure debt funds to address a void in the debt markets.*

The infrastructure fund market remains in an early stage of development compared to the private equity or real estate fund markets. Certain attributes of infrastructure funds remain unclear and will likely clarify in the next few years as investment increases:

- *Fund duration preferences vary widely by investor;*
- *Individual fund benchmarking, as well as overall sector benchmarks, remain diverse; and*
- *Fees and carry are moving away from the standard "2 and 20" private equity formula to reflect risk/return and related management and operational intensity of the underlying strategies.*



INVESTING IN INFRASTRUCTURE

2012

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